

CLAIMS

1. Process for the preparation of ammonia by contacting an ammonia synthesis gas with ammonia catalyst particles arranged in a fixed bed, wherein the fixed bed comprises catalyst particles of the ammonia catalyst with a particle size being in the range of <1.5 mm and ≥ 0.2 mm.
2. The process of claim 1, wherein the fixed bed contains at least 10% by volume of catalyst particles having a particle size in the range of <1.5 mm and ≥ 0.2 mm.
3. The process of claim 1, wherein the fixed bed contains a mixture of particles with a size of 1.5-3.0 mm, 0.8-1.5 mm and 0.3-0.8 mm in a volume ratio of 40-70:10-40:10-30.
4. The process according to anyone of the preceding claims, wherein the synthesis gas is passed in radial direction through the fixed bed.

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